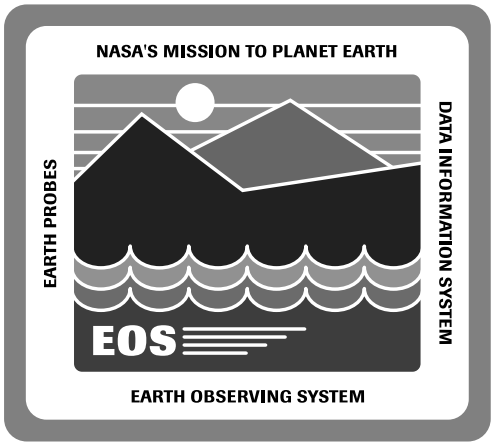
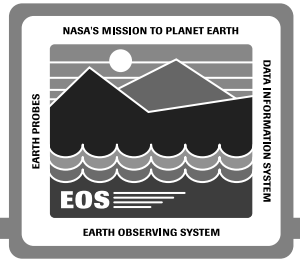


Planning and Data Processing

Mark Shannon

15 February 1995

Road Map for Planning & Processing Presentation



Overview
- **Concept Drivers, Key Features**
- **Production Management Flow**

Software Model

COTS/Prototypes
- **Evaluation**
- **OTS and Software Reuse**

Scenarios

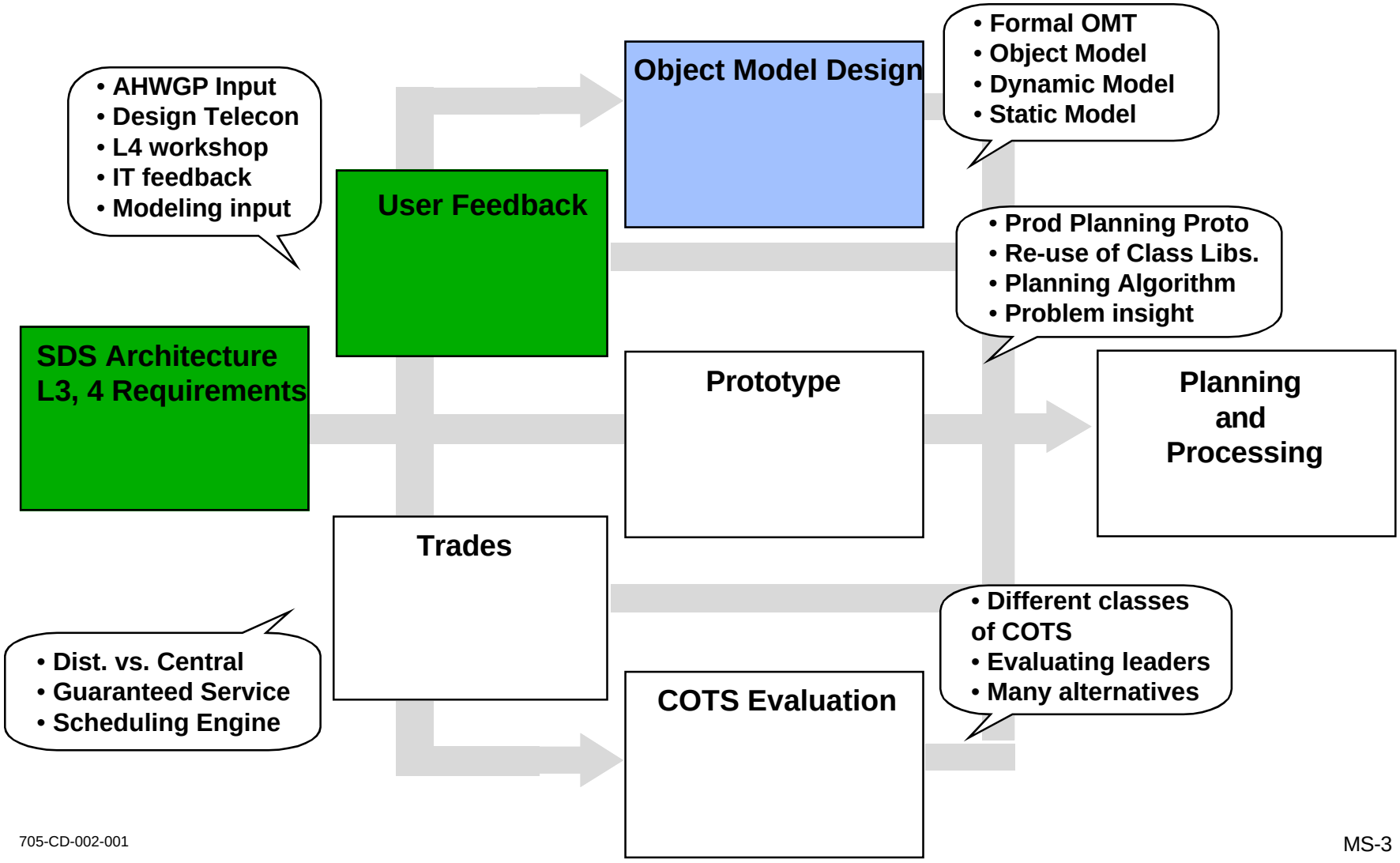
Cross DAAC Scheduling/Planning

Other Data Processing CIs
- **AI&T Tools**
- **Science Data Preprocessing**

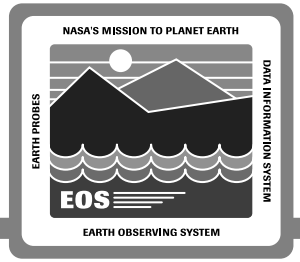
Hardware

Issues

Design Approach



Planning and Processing CSCI Design



Planning CSCI Interfaces

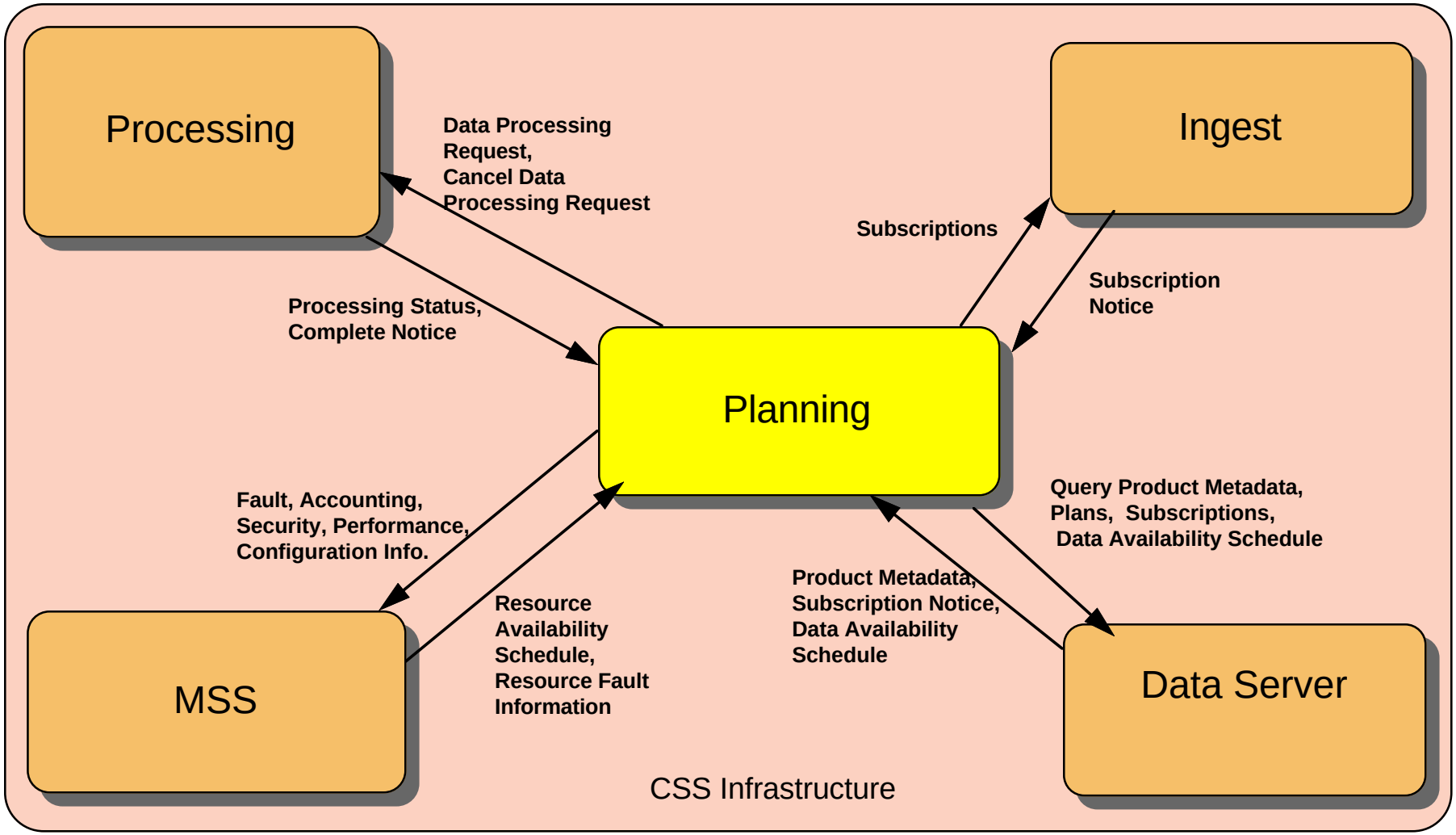
Processing CSCI Interfaces

Planning CSCI Architecture

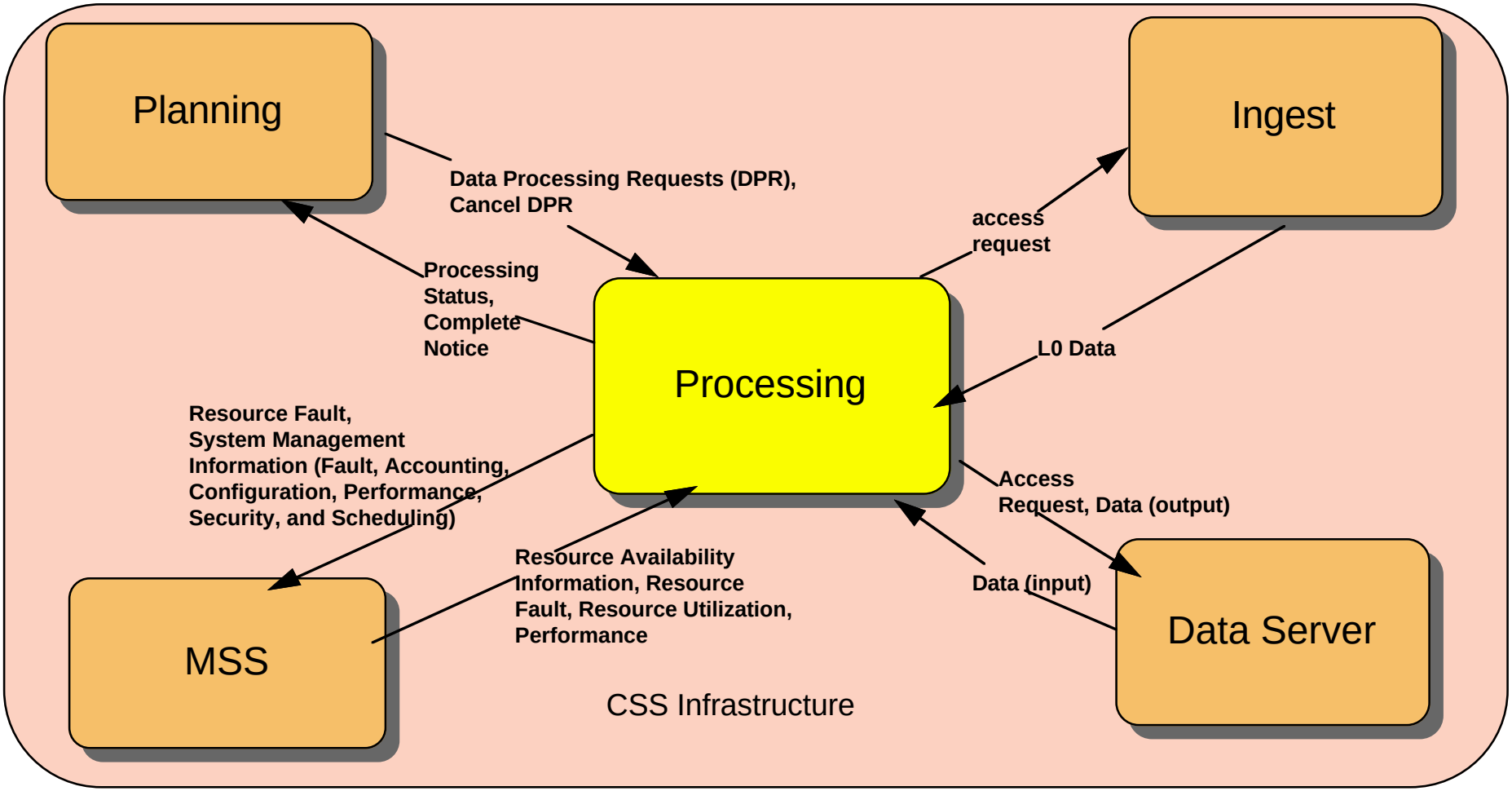
Planning and Processing CSC Interfaces

Processing CSCI Architecture

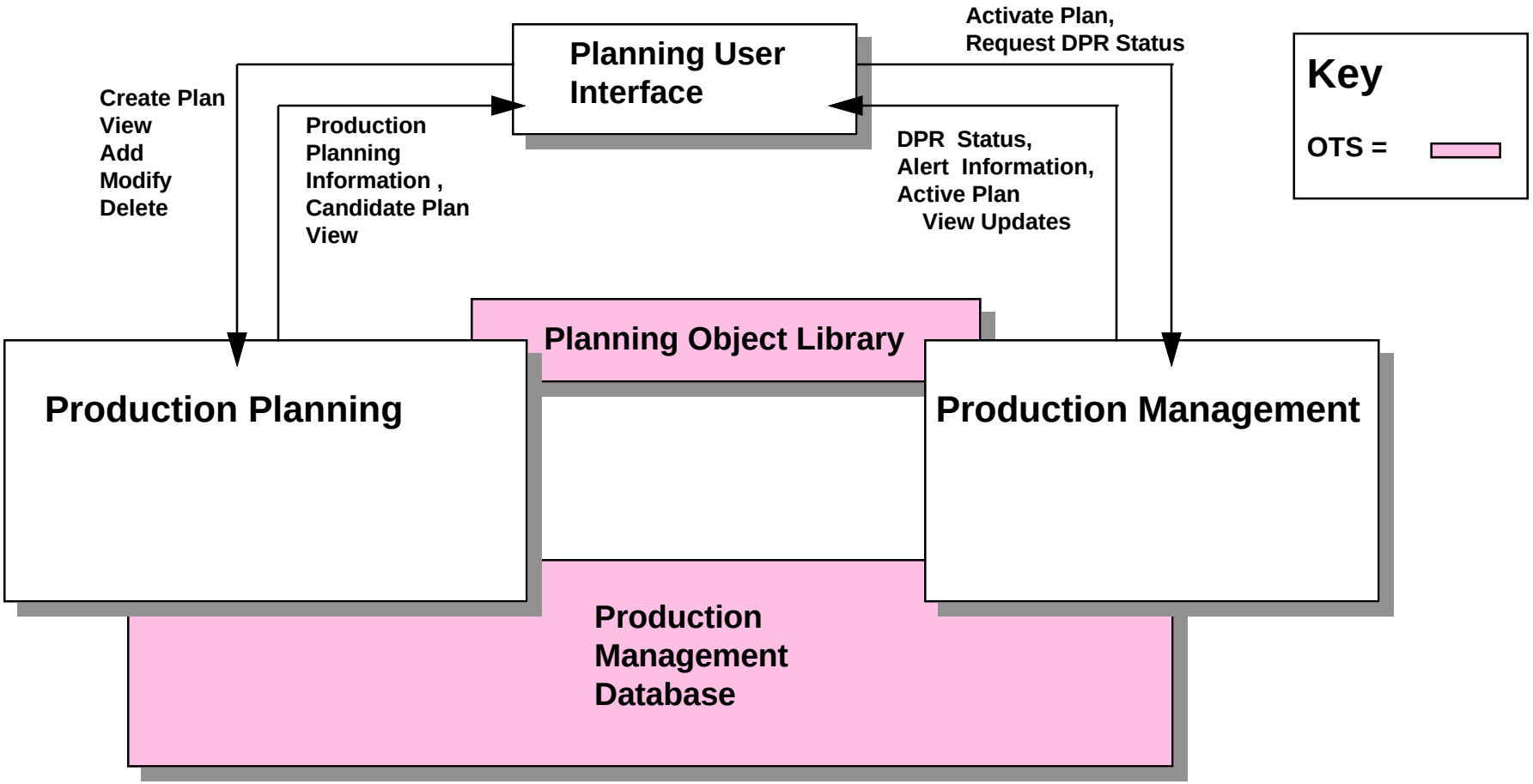
Planning CSCI Interfaces



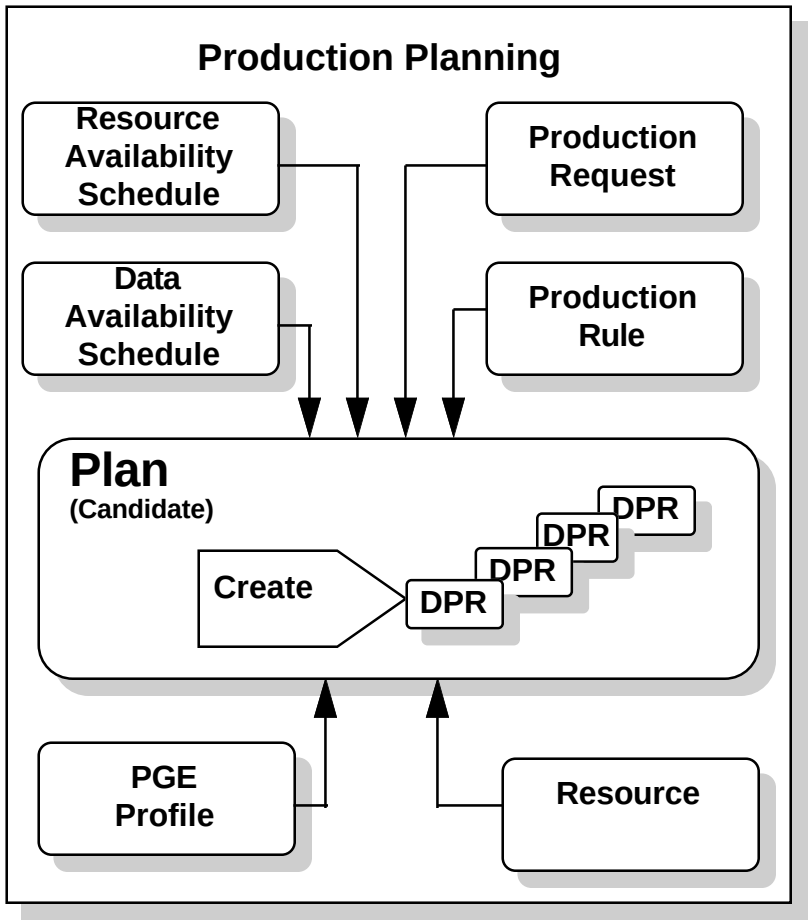
Processing CSCI Interfaces

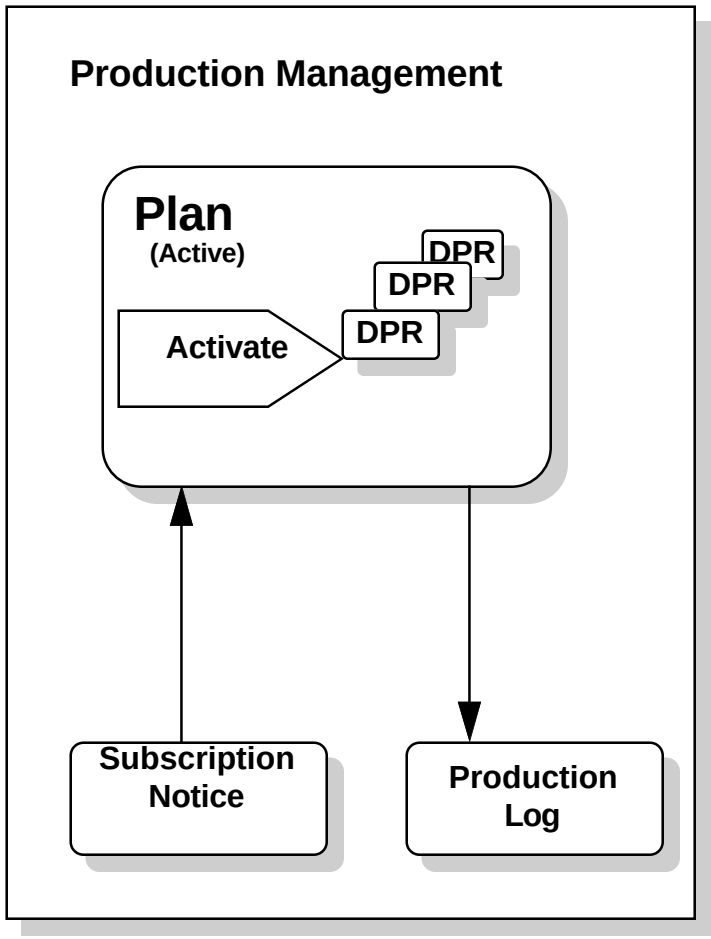


Planning CSCI Architecture

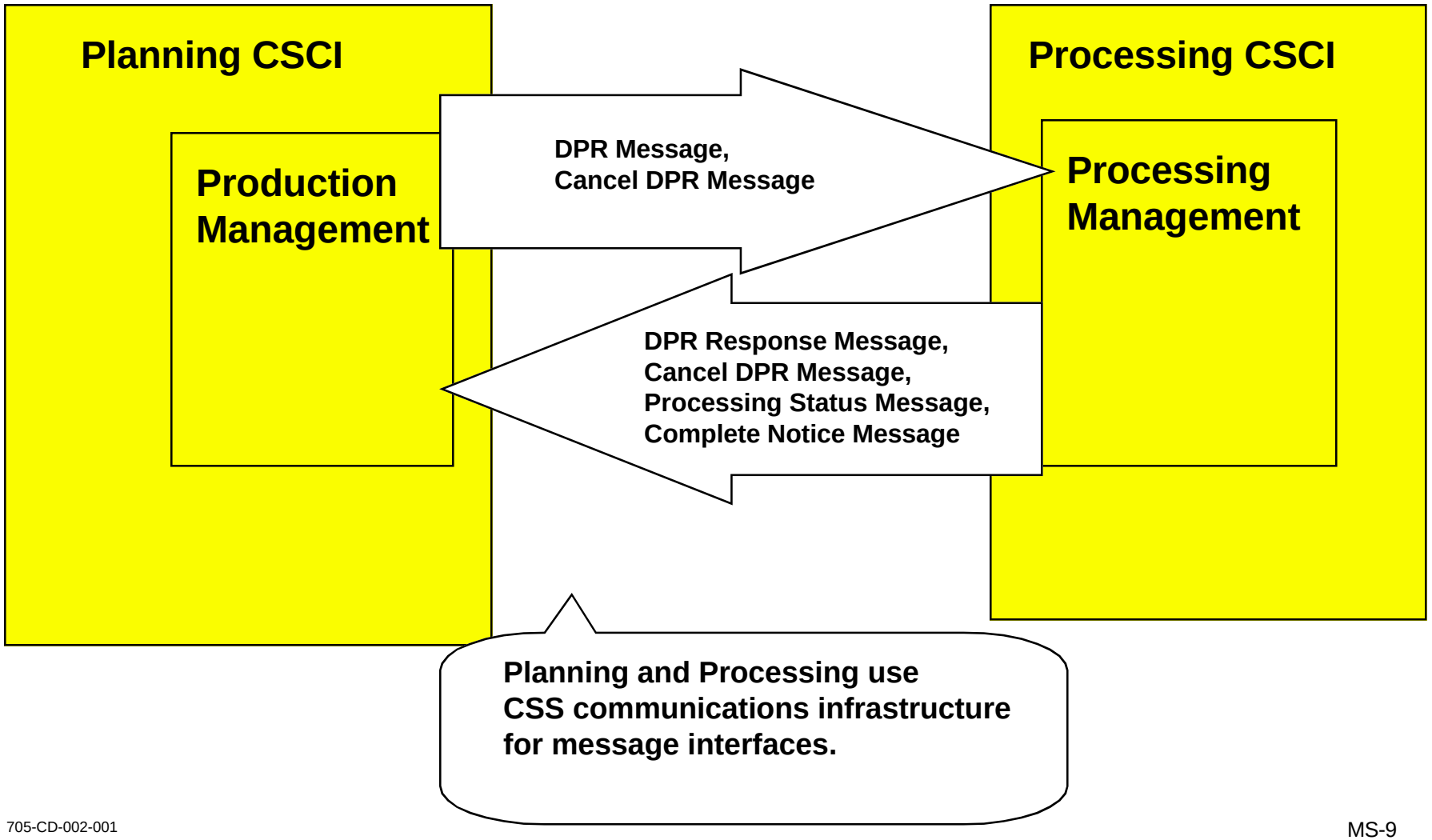


Planning CSCI Architecture

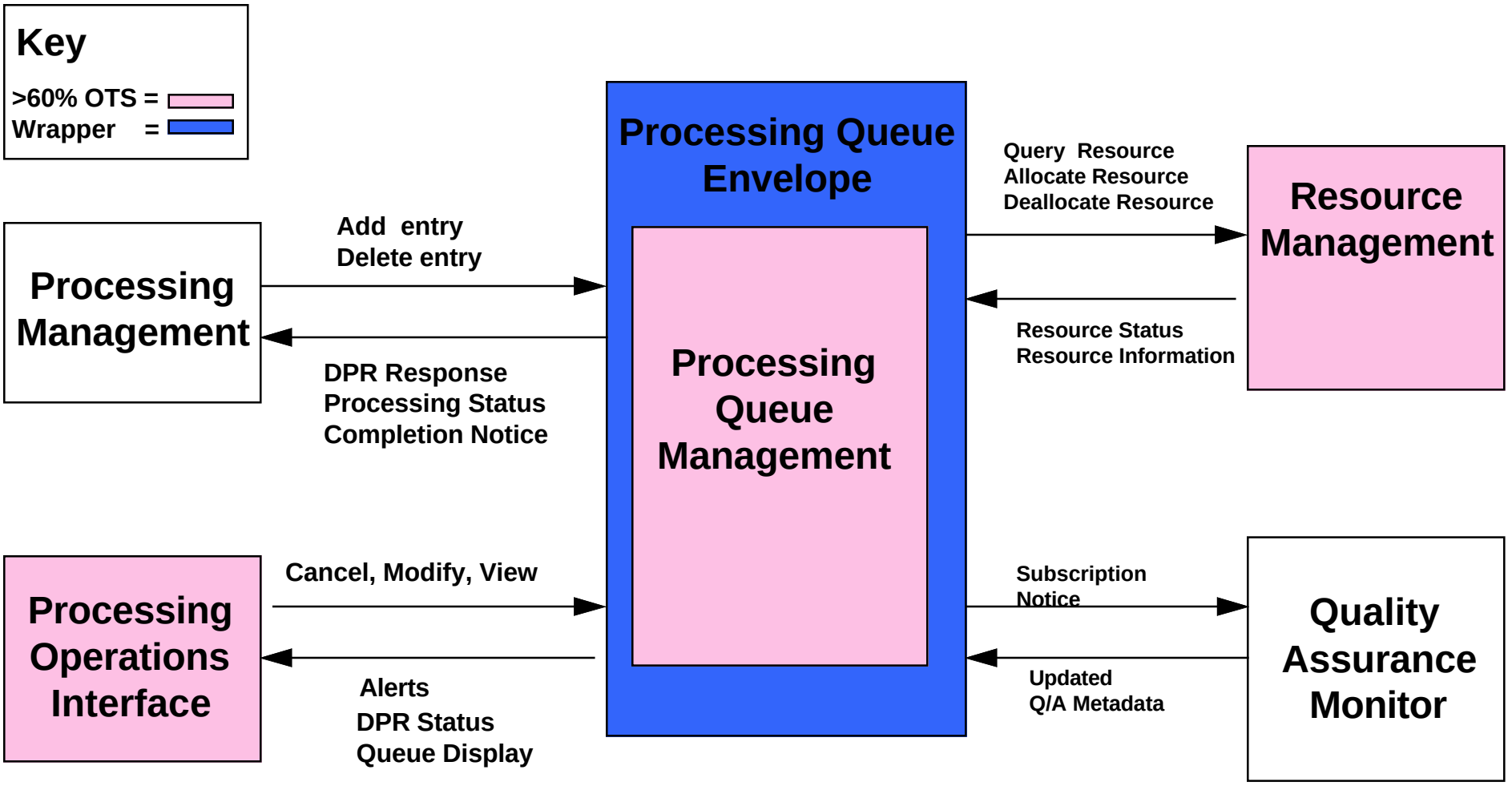




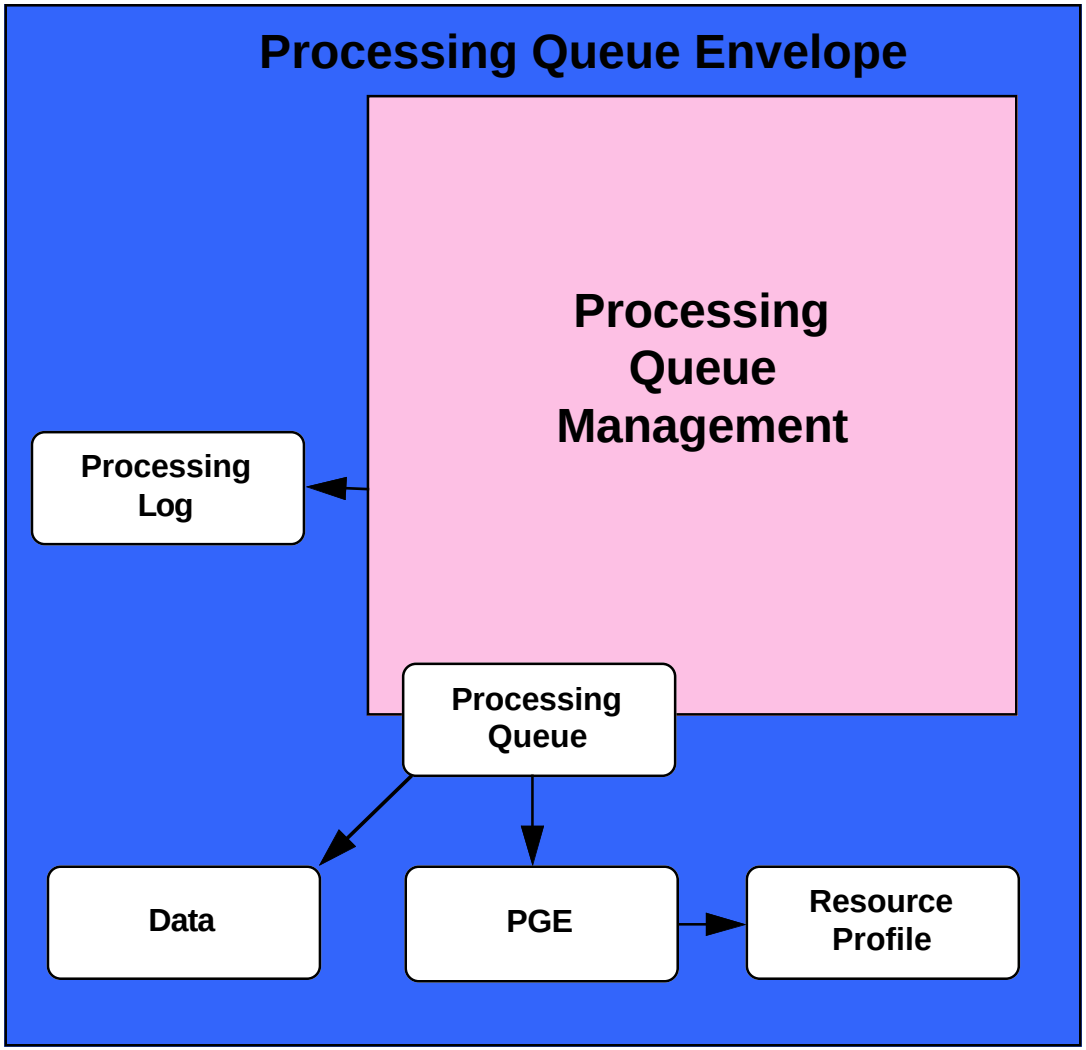
Processing and Planning Interfaces

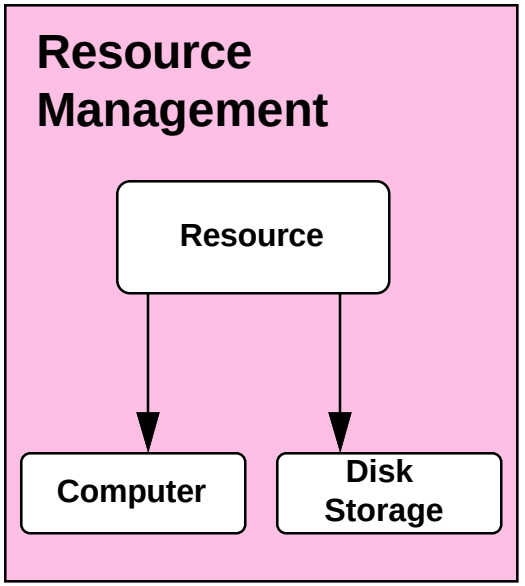


Processing CSCI Architecture

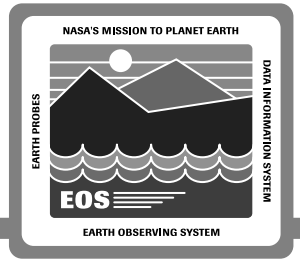


Processing CSCI Architecture





Road Map for Planning & Processing Presentation



Overview

- **Concept Drivers, Key Features**
- **Production Management Flow**

Software Model

COTS/Prototypes

- ***Evaluation***
- ***OTS and Software Reuse***

Scenarios

Cross DAAC Scheduling/Planning

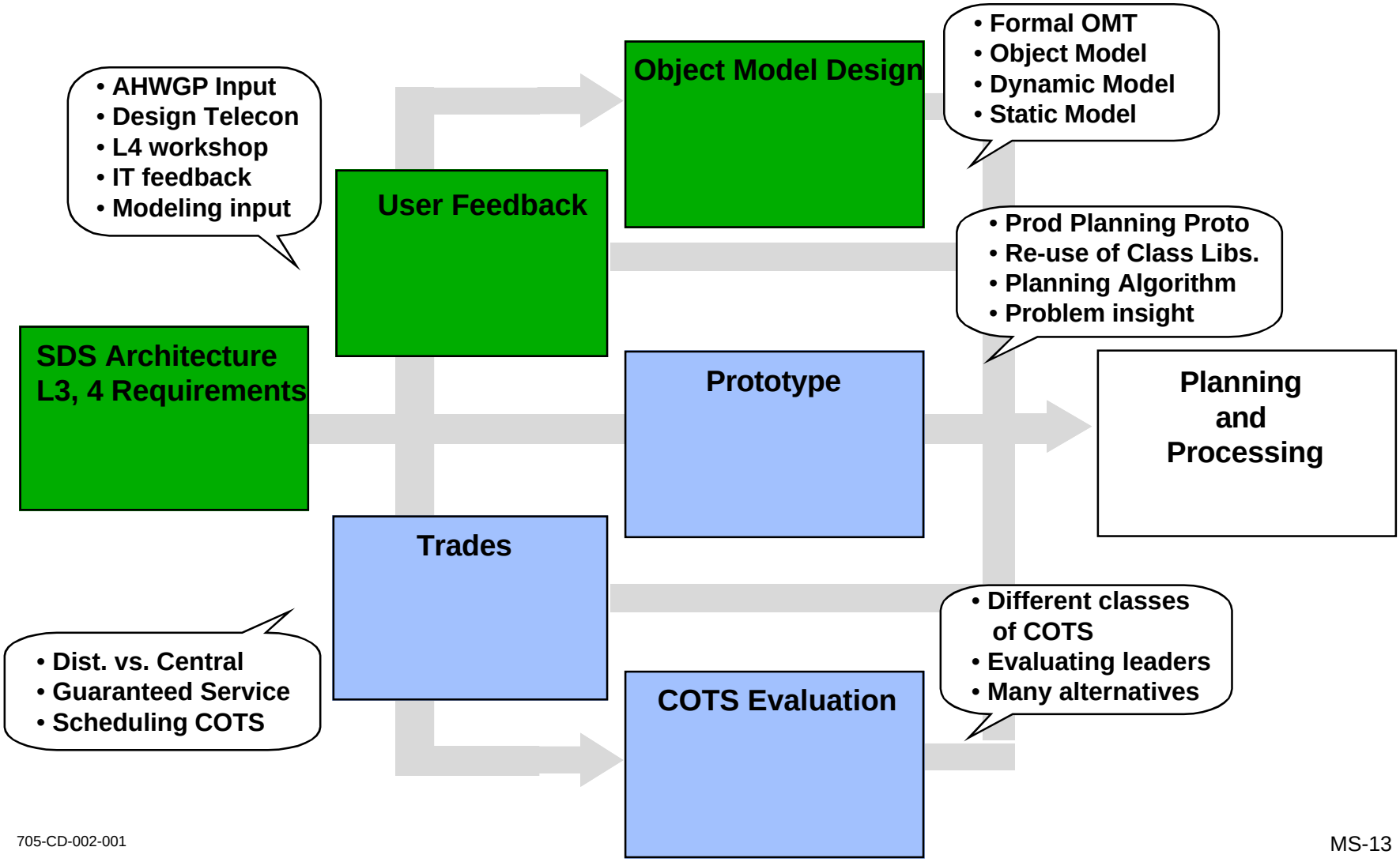
Other Data Processing CIs

- **AI&T Tools**
- **Science Data Preprocessing**

Hardware

Issues

Design Approach



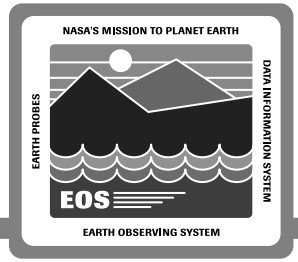
Planning and Processing Trade Studies

	Objective	Results
Scheduling Engine Trade	Evaluate COTS and public domain scheduling products for potential use in ECS.	Evaluation of COTS products is ongoing. Processing is expected to be COTS-intensive. Planning is expected to be a mixture of COTS, reuse and custom code. Analysis will continue through CDR. Preliminary results summarized in DID 211.
Centralized vs. Distributed Scheduling Trade	Assess the effect of various deployment options for both Planning and the queuing portion of Processing.	The distribution of planning and queuing for processing will be influenced by the selection of COTS. This trade will continue through CDR. Preliminary results summarized in DID 211.
Guaranteed Service Trade	Evaluate the resource cost to guarantee the timeliness of data production.	Initial results suggest that priorities will assure an adequate level of guaranteed service. This trade will continue through CDR. Preliminary results summarized in DID 211.

Planning and Processing Prototypes

	Objective	Results
4th-Dimension prototype	Determine effectiveness of the 4th-Dimension product to support ECS Planning and Processing functions.	Most Promising Candidate. Evaluation continues to determine 4th-Dimension's capability to support ECS production volume.
CA-Unicenter prototype	Determine effectiveness of CA-Unicenter product to support ECS Planning and Processing functions.	Provides similar capabilities as the 4th Dimension product. Evaluation of the product is continuing.
DQS/Data Processing prototype	Develop knowledge of the queuing type OTS packages within the framework of the Planning and Processing design as specified in the SDPS System Design Specification.	A Proof of concept Prototype developed. Evaluation continues to further analyze other types of OTS queuing systems.
Planning Prototype	Prototypes the SDPS Production Planning design with the Hughes Delphi C++ class library. Determine whether the Hughes Delphi product can be used to develop SDPS Planning capabilities	Provides a framework to develop Planning applications. Reuse of Delphi Code for some Planning functions is being considered. Testing Delphi APIs with DBMS/other packages to determine ease of integration.

OTS and Software Reuse Plans



	Potential Candidates	
CSC (PLS, DPS)	**OTS**	**Reuse/Shareware**
Planning User Interface		CLS
Production Management	4D, Unicenter	
Planning Object Library		Delphi/HCL
Production Management DBMS	RDBMS	
Processing Management	4D, Unicenter	
Processing Queue Management	4D, Unicenter	DQS, PBS, Smartnet
Resource Management	4D, Unicenter	DSS, INS
Processing Operations Interface	4D, Unicenter	CLS
Quality Assurance Monitor Interface		CLS